

REMARKS

Applicant requests favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Of claims 1-16 that were pending in the application, claims 1-7 were rejected in the Office Action and claims 8-16 remain withdrawn from consideration. By way of this amendment, Applicant has amended claim 1. Therefore, claims 1-7 are respectfully resubmitted for further consideration.

Rejections of Claims 1-7 under 35 U.S.C. § 103

The Office Action rejected each of claims 1-7 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of U.S. Patent Nos. 6,007,320 (“Froese”), 4,933,125 (“Reiniger”), 5,538,676 (“Bielfeldt-I”), 5,762,980 (“Bielfeldt-II”), and 5,458,477 (“Kemerer”). Specifically:

- (a) claims 1 and 7 were rejected over Froese in view of Reiniger;
- (b) claims 1, 4, and 7 were rejected over Froese in view of Reiniger and further in view of Bielfeldt-I;
- (c) claims 2, 3, and 5 were rejected over: (i) Froese in view of Reiniger and further in view of Bielfeldt-II; and (ii) Froese in view of Reiniger, Bielfeldt-I and Bielfeldt-II;
- (d) claim 6 was rejected over: (i) Froese in view of Reiniger and further in view of Kemerer; and (ii) Froese in view of Reiniger, Bielfeldt-I, and Kemerer;
- (e) claim 4 was rejected over Froese in view of Reiniger and further in view of Bielfeldt-I – Applicant notes that is rejection is duplicative of the rejection of claim 4 in item (b), *supra*.

For the following reasons, Applicant respectfully traverses each of these rejections.

As amended, independent claim 1 recites a method for the continuous manufacture of wood material boards having a textured surface on at least one side. This method includes, among other possible steps (*italic emphasis added*):

- forming a mat of a wood or lignocellulose-containing material, treated with a binding agent, onto a continuously moving conveyor belt;
- introducing the mat between steel belts each circulating around one of an upper and lower frame part of a continuously operating press; and
- after the step of introducing the mat, curing the mat in the continuously operating press to form one of a strand of boards and an endless wood material board by applying pressure and heat to the mat,

wherein the continuously operating press comprises at least one endless metal mesh belt configured to circulate with a corresponding one of said steel belts and with the mat,

wherein the metal mesh belt comprises a material having a thermal conductivity considerably higher than that of the corresponding steel belt and having a thermal expansion coefficient approximately equal to that of the corresponding steel belt,

wherein the metal mesh belt and the corresponding steel belt are configured to pass through an insulating tunnel, in a return run, to reduce heat loss by thermal radiation,

wherein the metal mesh belt is configured to pass through a heating tunnel, which is separated from the corresponding steel belt,

wherein the heating tunnel is configured to heat the metal mesh belt to a temperature that is higher than a temperature of the corresponding steel belt by at least 40°C, and

wherein curing the mat comprises applying a specific pressure to the mat of at least 0.3 N/mm² during a first at least 80% of a pressing time.

As hereafter explained in detail, none of Froese, Reiniger, Bielfeldt-I, Bielfeldt-II, and Kemerer teaches or suggests the above-italicized limitation of claim 1.

In supporting both of the rejections of claim 1, the Office Action relied on Froese, col. 3, lines 59-66, which teaches that a sieve belt (*i.e.*, a mesh belt) and a press belt juxtaposed therewith are composed of approximately the *same* material and have “essentially *similar* thermal conductivities and coefficients of thermal expansion.” The Office Action asserted that this language of Froese taught the following limitation previously recited in claim 1: “wherein the metal mesh belt comprises a material having a thermal conductivity *substantially* higher than that of the corresponding steel belt and having a thermal expansion coefficient approximately equal to that of the corresponding steel belt.” Specifically, the Office Action asserted (on page 3) that the word “substantially” “casts a very broad light on the limitation of the mesh belt’s higher relative thermal conductivity.” In other words, the Office Action assert that the word “substantially” provided a broad range that would encompass nearly equal thermal conductivities.

One definition of “substantially” is: “*Considerable* in importance, value, degree, amount, or extent: won by a substantial margin.” THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, FOURTH EDITION (4th ed. 2000) (*italic emphasis added*). This was the intended definition of the word “substantially” in original claims 1, 8, and 10. However, in light of the Examiner’s misconstruction of “substantially,” Applicant has amended claim 1 to replace “substantially” with “considerably.” Support for this change is provided in application ¶ [0025], original claims 1, 8, and 10, the above definition of “substantially”, and in the corresponding definition of “considerably”, which is “Large in amount, extent, or

degree.” THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, FOURTH EDITION (4th ed. 2000). Clearly, claim 1’s recitation that the thermal conductivity of the metal mesh is *considerably* (*i.e.*, large in amount) higher than the thermal conductivity of the steel belt is directly opposite to Froese’s teachings of “essentially similar thermal conductivities.” Moreover, as hereafter explained none of Reiniger, Bielfeldt-I, Bielfeldt-II, and Kemerer cures this deficiency of Froese.

Reiniger teaches two heated press dies 46, 48. Reiniger fails to teach or suggest, however, steel belts and/or a metal mesh belt that is used in conjunction with at least one such steel belt. Accordingly, Reiniger likewise fails to teach or suggest a comparison of the thermal conductivities of a metal mesh belt and a corresponding steel belt and, therefore, fails to cure the deficiency of Froese.

Bielfeldt-I teaches a woven metal wire 2 and steel bands 6, 14, one of which (*i.e.*, band 6) corresponds to the woven metal wire 2. However, Bielfeldt-I is silent regarding the thermal conductivities of the woven metal wire and the corresponding steel band 6. As a result, Bielfeldt-I, like Froese and Reiniger, fails to teach or suggest that the thermal conductivity of the woven metal wire (*i.e.*, wire mesh) is considerably higher than that of the corresponding steel band 6 (*i.e.*, steel belt), as recited in claim 1.

Bielfeldt-II teaches screen belts 10, 11 (*i.e.*, mesh belts). In addition, Bielfeldt-II also teaches additional pressing belts 18, 19, which correspond to the screen belts 10, 11. However, like Bielfeldt-I, Bielfeldt-II is silent regarding the thermal conductivities of the screen belts 10, 11 and the corresponding pressing belts 18, 19. Therefore, Bielfeldt-II also fails to cure the deficiencies of Froese with respect to the thermal conductivities of the metal mesh belt and the corresponding steel belt recited in claim 1.

Kemerer teaches, in the “Background of the Invention” section, a thin, flexible, sheet-metal belt mold of “relative high thermal conductivity” (col. 1, lines 45-47) and a “thick low thermal conductivity silicone mold on at least one belt mold” (col. 3, lines 17-20). However, as the sheet-metal belt mold has a “high thermal conductivity” and the silicone mold has a “low thermal conductivity,” the Background teaches the exact opposite of that which is recited in claim 1. Moreover, Kemerer’s “Detailed Description of the Preferred Embodiment” section suffers a similar failure. Specifically, Kemerer’s *fiber* belts 37, 38 (which can not properly be analogized to the “*metal* wire mesh” recited in claim 1) have “about one-hundredth of the thermal conductivity (K factor) as steel.” Col. 8, lines 22-34. Moreover, this low thermal conductivity approaches that of the silicone molds discussed in the “Background of the Invention” section. Col. 9, lines 24-27. As a result, Kemerer, like

Froese, Reiniger, Bielfeldt-I, and Bielfeldt-II fails to teach or suggest that the thermal conductivity of a metal mesh belt is considerably *higher* than that of a corresponding steel belt, as recited in claim 1.

In light of the foregoing, it is clear that none of Froese, Reiniger, Bielfeldt-I, Bielfeldt-II, and Kemerer teaches or suggests a metal mesh belt having a thermal conductivity that is considerably higher than the thermal conductivity of a corresponding steel belt, as recited in claim 1. Accordingly, no combination of Froese, Reiniger, Bielfeldt-I, Bielfeldt-II, and Kemerer can be used to reject claim 1, or any claim dependent thereon, under 35 U.S.C. § 103(a). Moreover, as claims 2-7 depend from claim 1, each of these dependent claims is also allowable over any combination of Froese, Reiniger, Bielfeldt-I, Bielfeldt-II, and Kemerer, without regard to the other patentable limitations recited therein. Accordingly, Applicant earnestly solicits a withdrawal of all of the prior art rejections to claims 1-7.

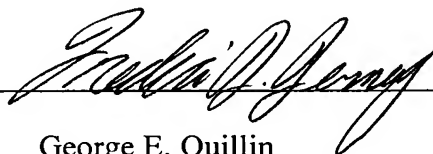
CONCLUSION

For the aforementioned reasons, claims 1-7 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

Date December 3, 2004

By



George E. Quillin
Registration No. 32,792

Customer Number: 22428

FOLEY & LARDNER LLP

3000 K Street, N.W.

Suite 500

Washington, D.C. 20007-5143

Frederic T. Tenney
Registration No. 47,131

Telephone: (202) 672-5300

Facsimile: (202) 672-5399

Attorneys for Applicant

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED REGARDING THIS APPLICATION UNDER 37 C.F.R. §§ 1.16-1.17, OR CREDIT ANY OVERPAYMENT, TO DEPOSIT ACCOUNT NO. 19-0741. SHOULD NO PROPER PAYMENT BE ENCLOSED HERewith, AS BY A CHECK BEING IN THE WRONG AMOUNT, UNSIGNED, POST-DATED, OTHERWISE IMPROPER OR INFORMAL OR EVEN ENTIRELY MISSING, THE COMMISSIONER IS AUTHORIZED TO CHARGE THE UNPAID AMOUNT TO DEPOSIT ACCOUNT NO. 19-0741. IF ANY EXTENSIONS OF TIME ARE NEEDED FOR TIMELY ACCEPTANCE OF PAPERS SUBMITTED HERewith, APPLICANT HEREBY PETITIONS FOR SUCH EXTENSION UNDER 37 C.F.R. § 1.136 AND AUTHORIZES PAYMENT OF ANY SUCH EXTENSIONS FEES TO DEPOSIT ACCOUNT NO. 19-0741.